PERFORMANCE EVALUATION AND MEASUREMENT PLAN

Incentive B – Award Fee

DESIGN, CONSTRUCTION, AND COMMISSIONING OF THE HANFORD TANK WASTE TREATMENT AND IMMOBILIZATION PLANT

CONTRACT NO. DE-AC27-01RV14136

Evaluation Period 2021
January 1, 2021, to December 31, 2021

Bechtel National, Inc.

Richland, Washington
Rev. 0 – Effective January 1, 2021

Issued By:

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Manager, DOE Office of River
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LIST OF TABLES

A. AWARD FEE OBJECTIVES

This Performance Evaluation Measurement Plan (PEMP) contains the following six award fee objectives:

1. Project Performance
2. Environmental, Safety, Health, and Quality Assurance (QA)
3. Direct-Feed Low-Activity Waste (DFLAW) integration
4. DFLAW Engineering and Construction
5. Startup, Commissioning and Operational Culture
6. High-Level Waste (HLW) and Pretreatment Facilities.

A.1 EVALUATION PROCESS

The U.S. Department of Energy (DOE), Office of River Protection will evaluate and measure performance for each of the six award fee objectives on a quarterly basis. The contractor will provide a summary of the effectiveness of its Contractor Assurance System to DOE to support the quarterly evaluations. DOE will identify Bechtel National, Inc.'s performance strengths and weakness at the end of each of the four quarters, year-to-date for each of the award fee objectives. DOE will assign adjectival ratings only at the end of the fourth quarter. The adjectival ratings for each of the award fee objectives will be based on the entire year's performance (see Table 1, "Award Fee – Incentive Ratings and Definitions").

Table 1. Award Fee – Incentive Ratings and Definition. (2 pages)

Adjectival Rating	Definition	Percentage of Award Fee Earned
Excellent	Contractor has exceeded almost all of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award fee evaluation period.	91% to 100%
Very Good	Contractor has exceeded many of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award fee evaluation period.	76% to 90%
Good	Contractor has exceeded some of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award fee evaluation period.	51% to 75%
Satisfactory	Contractor has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award fee evaluation period.	≤ 50%

Table 1. Award Fee – Incentive Ratings and Definition. (2 pages)

Adjectival Rating	Definition	Percentage of Award Fee Earned
Unsatisfactory	Contractor has failed to meet overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award fee evaluation period.	0%

A.2 AWARD FEE DETERMINATION

Award fee dollars earned are determined by the method presented in Table 2, "Award Fee – Fee Earnings Calculations." The adjectival ratings are as determined in Section A.1 above. The Fee-Determining Official (FDO) will determine the percent of fee earned according to the ranges in Table 1 above. The award fee dollars earned will be the product of the award fee available and the percent of award fee earned. The FDO may consider any other pertinent factors in making a final fee determination,

Table 2. Award Fee – Fee Earnings Calculation.

	Award Fee Objective	Award Fee Available	Adjectival Rating	Percentage of Award Fee Earned	Award Fee Dollars Earned
1	Project Performance	$2,000,000			
2	Environmental, Safety, Health, and Quality Assurance	$2,200,000			
3	Direct-Feed Low-Activity Waste Integration	$372,603			
4	DFLAW Engineering and Construction	$200,000			
5	Startup, Commissioning and Plant Management and Operational Culture	$2,700,000			
6	High-Level Waste and Pretreatment Facilities	$400,000			
	Total	$7,872,603			

A.3 AWARD FEE OBJECTIVE 1: PROJECT PERFORMANCE

DOE will evaluate the contractor's cost and schedule performance based upon actual incurred costs compared to the total estimated costs of that work and actual schedule performance as compared to the planned schedule.

The analysis of project performance will consider changed programmatic requirements, changed statutory requirements, and/or changes beyond the contractor's control, which impact cost and/or

schedule. DOE will rely on other objective and/or subjective cost and schedule performance elements, such as critical path and float analysis, to evaluate the contractor's performance, which includes, but is not limited to the following:

- Cost Control – The contractor maintains cost control (i.e., actual costs incurred for work performed are equal to or less than the planned costs for that work) and actively pursues cost containment and reduction through innovative approaches and management of resources. Cost control will be monitored against the Performance Measurement Baseline for the Low Activity Waste (LAW) Facility, Balance of Facilities, and Analytical Laboratory (collectively LBL) / DFLAW.
- Schedule Control – The contractor maintains a contract compliant, resource loaded, logic-tied schedule with discrete tasks through contract completion, including credible and accurate critical path network(s) that accurately portray critical work activities toward meeting the contract milestone date for demonstration of DFLAW hot commissioning and implements innovative actions to accelerate the overall project schedule with due consideration to the overall risk profile.
- Communication – The contractor is expected to be transparent and communicate clearly and effectively for the reporting of data and metrics. In addition, it is expected that the Contractor works proactively with DOE communications division to support enhanced communications with all key stakeholders.
- Risk Management – The contractor identifies new threats, opportunities, and risk mitigations to demonstrate an effective risk program. Risks shall be identified early to maximize risk mitigation opportunities and risks shall be tracked, managed, and monitored using the Waste Treatment and Immobilization Plant (WTP) Risk Register Database until mitigated to the maximum extent practical, avoided, or accepted in accordance with formal program requirements. Risk effectiveness shall be reported for closed threats, open threats, and opportunities realized.
- Available Funding Utilization – The contractor optimizes utilization of funds while planning for an appropriate amount of carryover to cover outstanding year-end commitments and to provide for the first few weeks of continuing operations into the next fiscal year.
- Baseline and Contract Alignment – The contractor shall maintain alignment between the baseline and the contract. The contractor shall submit quality documents as required to support the alignment between the baseline and the contract and to support independent reviews.

Subcontractor Management and Incurred Cost Audits –

- The contractor will complete a minimum of 6 subcontractor incurred cost audits to standard (Generally Accepted Auditing Standards).
- Demonstrate effective subcontract management, including award of subcontracts as scheduled, inclusion of all requirements, subcontractor audits, and subcontract administration. Contractor will monitor subcontractor performance to ensure compliance

with all requirements including small business subcontracting plans, Buy American Act, and applicable labor statutes.
- Demonstrate effective use of domestic suppliers of PPE and achieving on-time-delivery of PPE.

Within each of the areas listed above, DOE will evaluate the contractor's assurance system based on the following:

- Methods of monitoring and measuring performance, including metrics, assessments, surveillances, and other operational activities, are effectively used to provide an accurate representation of the current performance of mission objectives and goals, to include performance of a safety, health, environment, and quality program, relative to defined standards.
- Demonstrate that management system owners and levels of management are aware of applicable requirements and the status of compliance to those requirements.
- Demonstrate that risks to mission and operations are being effectively identified, monitored, communicated, and managed (i.e., accepted, avoided, or mitigated).
- Demonstrate a healthy self-critical approach to ensuring actions taken to manage risks or issues are appropriately effective.
- Demonstrate proactive communication with Corporate Official and parent companies to identify project issues early and resolve.
- Timely, open, and continuous communication on mission and operations risks and issues with DOE.

Lessons learned experiences and good practices are used to inform applicable organizations of adverse work practices or experiences and are incorporated into the overall work process to improve mission and operations performance.

A.4 AWARD FEE OBJECTIVE 2: ENVIRONMENTAL, SAFETY, HEALTH, AND QUALITY ASSURANCE

DOE will assess this award fee objective in the areas of environmental permitting and compliance; nuclear safety; quality assurance (QA); safety, health, and quality programs; and Contractor Assurance System.

Environmental Permitting and Compliance

Evaluations of the Contractors performance will be based on:

- Maintain a constructive and effective working relationship with all regulatory agencies to maximize the probability of successful delivery of the DFLAW program.

- Development and implementation of an integrated environmental protection program that applies best commercial practices and assures compliance with environmental requirements.
- Development of required applications for permits; licenses; and other regulatory approvals required for design, construction, and specifically commissioning of WTP.
- Effective collaboration and integration with other Hanford contractors to provide data for site wide regulatory monitoring and reporting.
- Contractor will assess and track environmental performance. Contractor's work shall be accomplished in a manner that achieves high levels of quality, and protects the environment, workers, and the public.
- DOE will rely on evaluations of the contractor's performance in areas that include but are not limited to quality and timeliness of permit applications and other deliverables required to support project execution, proactive assessment of the environmental protection program, efforts to continuously improve, and regulatory compliance - including the number and seriousness of any findings or concerns.
- Submittal of permitting products with a high degree of quality and which enable schedule efficiencies. Specific deliverables that will be evaluated are:
- Scheduled 2021 commissioning items from the to be finalized DOE/BNI commissioning plan – including items such as appropriate staff training on the Dangerous Waste Permit, and BNI continuing assessment of WTCC waste tracking in the commissioning phase
- WTP PSD application amendment to DOE, and support submission to ECY by April 18, 2021.
- All LAW, Lab, and EMF dangerous waste permit submittals, and all required 180-day notifications to ECY.
- Stack plant boiler performance test results to DOE for transmittal to the Washington State Department of Ecology.

Nuclear Safety

The WTP Contract, Section C, "Statement of Work," Standard 9, "Nuclear Safety (Table C.5-1.1, Deliverable 9.1)," describes contractor requirements to ensure radiological, nuclear, and process safety. This work scope includes implementation of a standards-based safety management program in compliance with the rules provided in 10 CFR 830, "Nuclear Safety Management," on nuclear safety to ensure WTP safety requirements are defined, implemented, and maintained.

Evaluation criteria to measure performance will include DOE's evaluation of the contractor's progress toward and compliance with contract requirements for nuclear safety performance. The contractor's ability to demonstrate performance and progress will be evaluated against interim project schedules for nuclear safety submittals and supporting documentation (e.g., hazards analyses) with consideration of any emerging issues. Compliance will be evaluated against guidance found in DOE-STD-3009-1994, *Preparation of Nonreactor Nuclear Facility Documented Safety Analysis*, Chg. 3, DOE-STD-1228-2019, *Preparation of Documented Safety*

Analysis for Hazard Category 3 DOE Nuclear Facilities, and other contract requirements and formal clarifying direction from DOE.

DOE will consider any available information bearing on nuclear safety performance in making this evaluation. Documents, activities and specific areas of focus to be considered include:

- Draft nuclear safety deliverables submitted for informal review possess a high degree of quality, and meet the requirements defined in the implementation plan for Contract Standard 9. Acceptable quality to be determined through use of existing quality engineering metrics for in-process documents.
- Nuclear safety calculations and engineering studies developed to support resolution of technical issues will possess a high degree of quality and will meet the requirements defined in the implementation plan for Contract Section C, Standard 9 for submittal of draft documents for informal review.
- Effectiveness in self-identifying nuclear safety concerns early and responding to concerns raised both internally and by external stakeholders and review teams. This area will include evaluation of the plans, metrics, and effectiveness of the transition to operations for the BNI nuclear safety organization. Assessment in this area will also include demonstrating progress to achieve sustained BNI NSE organizational continuous performance to address past PEMP concerns.
- Establishment and implementation of a compliant, complete, and stable Safety Basis and USQ/SE processes to support a successful transition to DFLAW Facility Commissioning needs while also completing the conditions of approval documented in the Safety Evaluation Report for the LAW DSA (18-NSD-0009, "Contract No. DE-AC27-01RV14136 – Approval of 24590-LAW-DSA-NS-18-0001, "Documented Safety Analysis for the Low-Activity Waste Facility," and 24590-LAW-TSR-NS-18-0001, "Low-Activity Waste Facility Technical Safety Requirements,").
- Demonstrated progress towards an effective integration of Nuclear Safety and Chemical Safety hazards analysis processes, the USQ/SE and MOC processes, and responses to new information and discovered conditions.

Quality Assurance

The QA program and quality of performance objective will evaluate the contractor's actions to strengthen the existing QA program, resolve QA issues, support the implementation of the commissioning and operations QA program, and improve the overall quality culture on the WTP Project.

DOE will perform both objective and subjective evaluations of the contractor's efforts to:

- Demonstrate implementation and effectiveness of the approved Quality Assurance Program for Engineering, Procurement and Construction (EPC) activities.
- Implement a C&O program in accordance with the DOE approved, Quality Assurance Program Description (QAPD) and demonstrate that the program has been adequately implemented to support on-going DFLAW activities.

- Identify and demonstrate effective handling of emerging QA program issues and of program backlog (such as CRs, and NCRs,) for both EPC and C&O Quality Programs.
- Demonstrate application of the approved graded approach to achieve efficiencies and quality improvement. Plan, schedule, and perform effective QA surveillances that includes verifying compliance with the approved QAP (QAPD, graded approach, quality assurance manual (EPC only), quality assurance implementation plan (C&O only)), and flow down of requirements into the QAP, In addition include bias-based coverage for higher consequence processes and activities.
- Demonstrate effective management of Plant Installed software quality assurance program to encompass testing, training, orientation, and mentoring of WTCC staff, and resolution of all startup/commissioning/plant operations software quality issues including software traceability issues as needed to achieve readiness prior to DFLAW start-up.

Safety and Health Programs

DOE will perform both objective and subjective evaluations of the contractor's efforts to:

- Maintain and strengthen an effective nuclear safety quality culture recognized by employees and stakeholders as sustaining a safety conscious work environment where safety, quality, or other concerns can be raised without fear of retaliation.
- Demonstrate safety performance is being actively monitored and evaluated to systematically improve culture and processes.
- Demonstrate that an effective work hazard analysis and controls process has been implemented to reduce injury/illnesses and work place hazards.
- Demonstrate implementation and effectiveness of the Worker Safety and Health Program for Engineering, Procurement and Construction (EPC) activities.
- Demonstrate progress to develop and implement Safety Management Programs (SMPs) as needed to achieve readiness prior to the scheduled DFLAW start-up. SMP's to be evaluated within this element include Emergency Preparedness, Fire Protection, Radiation Protection, Hoisting and Rigging, Chemical Safety Management, and Worker Safety and Health.

A.5 AWARD FEE OBJECTIVE 3: DIRECT-FEED LOW-ACTIVITY WASTE INTEGRATION

Performance measurement in this element will include focus on an empowered and leading DFLAW integration team focused on the timely alignment of interfaces, elimination of process gaps, early identification of issues, and mitigating program risks associated with start-up and commissioning. DOE will assess this award fee objective in the following areas:

- Effectively coordinate the projects that comprise the DFLAW Program; competing or unaligned priorities are identified and resolved between contractors or elevated through the DFLAW Program for resolution.

- Ensure the interfaces between the projects are effectively managed, scheduled, and tracked so that the integrated DFLAW Program is completed successfully.
- Ensure the DFLAW portfolio of projects operate as an integrated system without gaps or conflicts at the project and contractor interfaces.
- Ensure solutions brought to DOE are timely and represent best value outcomes; products are fully developed with specific actions and vetted recommendation as necessary; resulting actions are tracked to closure.
- Enhance communications, teamwork, and trust between DFLAW Program partners to unify all aspects of the integrated DFLAW Program.

A.6 AWARD FEE OBJECTIVE 4: DFLAW ENGINEERING AND CONSTRUCTION

DOE will assess this award fee objective in the areas of Engineering and Construction performance based upon the following:

Corrective action management and issue management for Engineering

- Establish a goal of 72% issue self-identification rate, defined as internally self-identified issues divided by the total number of issues identified. Total number of issues identified includes internally self-identified, externally identified, and self-revealed issues (note – self-revealed issues are not part of the set of self-identified issues). Develop a metric to track this goal by 1/31/2021 and, when the current self-identification rate is less than the goal, demonstrate consistent improvement throughout the year (at least a 5 percentage point improvement in the self-identification rate per quarter until the goal is met/maintained or exceeded)
- Demonstrate open actions assigned to RE and PENG (from NCRs, CRs, Punchlists, etc.) are tracked, prioritized, and completed. Develop metrics by 2/28/2021 and demonstrated improvement throughout the year.
- Identified issues are promptly entered into the appropriate corrective action management system (e.g. NCR, CR).
- Issue closures have a sound technical basis.

Configuration management (CM)

The WTP CM program and all of it elements are implemented and managed to ensure the following:

- Initial design (when applicable) and changes to the design are properly developed, evaluated, reviewed, approved, implemented, verified, and incorporated into facility documentation, configuration, and training in accordance with the Technical Baseline document.
- The physical configuration and associated software is in alignment with design at system handover for DFLAW.

- Consistency among design documentation, physical configuration, and facility documentation is maintained throughout the WTP life cycle. This will include component identifiers, component names, etc.
- Essential drawings for a scoped system are updated prior to handover unless waived by procedure and if waived then completed by the established date in the waiver.
- Design and engineering output – Issue adequate design and engineering products reflecting acceptable quality and technical analysis; manage margin; control unverified assumptions; and adequately flow down requirements to calculations, drawings, specifications, datasheets, and procurement documents. Acceptable quality to be demonstrated through use of metrics for engineering products.

Engineering products

- Issue adequate design and engineering products that have high technical and administrative quality.
- Requirements are flowed down to calculations, drawings, specifications, datasheets, procedures,etc.
- High quality is defined via lack of technical errors, referencing correct revisions, minimal administrative errors, implementation of correct requirements, clear and concise detail, etc.
- Chemical Safety Management Program is fully and satisfactorily implemented into engineering procedures, guides, specifications, etc. This can be demonstrated through assessments, issue identification and closure of associated corrective actions. This should include defining the enhanced role of system engineers as they relate to Chemical Safety systems and how formal system health will be maintained for systems so designated.

Transition to Operations

Contractor engineering implement programs, processes, procedures, guides, etc. that support continued operational readiness of WTP facilities, areas, equipment, components, and supporting infrastructure. Additionally, when DOE staff requests a desire to oversee contractor implementation or work performance, the contractor will communicate these opportunities to DOE in advance.

The following scheduled activities support a successful transition to operations. The measurement will be completion of these activities and all precursors prior to the scheduled forecast date for the most current approved Level 4 schedule:

- Complete Melter 1 and 2 WESP High Level – SIF 2
- Complete Melter 1 SBS Low Level and SBS High Level/Melter 2 SBS – SIF 3
- Melter 1 and 2 Primary and Standby Film Cooler Low Flow – SIF 18
- LAW Caustic Scrubber Recirc Low Pressure & Low Flow - SIF 4
- LAW Offgas Header High Pressure and Low Pressure - SIF 8

- Offgas Systems – Operability Review Complete
- Review and approval of Test Results Package for the six bullets specified above.
- Implement the Mitigation/Reliability Centered Maintenance strategy for all Critical Component Risk identified as "Med Hi" or higher per 24590-WTP-PL-PENG-19-0021, Rev 1 prior to loss of power testing.
- Engineering personnel are trained and qualified prior to the ISMS Phase 2 verification.
- Contractor will be evaluated based upon completion of the Activity Descriptions below in accordance with the 2021 rebaseline schedule.

A.7 AWARD FEE OBJECTIVE 5: STARTUP, COMMISSIONING AND PLANT MANAGEMENT AND OPERATIONAL CULTURE

DOE will assess this award fee objective in the areas of startup, commissioning and plant management, and readiness based on the following criteria.

Startup:

- Turnover of systems from construction to startup will be completed with effective management of impacts from equipment aging or other adverse conditions impacting startup work performance.
- Successful performance of component and initial system testing, to include review and approval of component test result packages for scoped systems consistent with the 2021 – re-baseline schedule.

  System Software Functional Testing

- Software changes initiated during startup were either tested or were included on a punch list and retested successfully before handover of the system.

Commissioning and Plant Management - Activities expected to complete on or before the date established in the rebaseline completed in early 2021:

LAW

- LAW LVP-L-01 - Melter 1 Train Available for Use
- LAW LVP-L-01 - Melter 2 Train Available for Use LAW CxV - Integrated HVAC Balance COMPLETE
- LAW Component & System Testing Complete

EMF

- EMF DOW Submit Handover to Facility Management Milestone
- EMF PCW Submit Handover to Facility Management Milestone EMF SCW Submit Handover to Facility Management Milestone
- EMF Component & System Testing Complete Commissioning and Plant Management
- Continue optimization of the Commissioning test program through development of implementation tools, lessons learned, and proactive response to emergent issues
- Demonstrate effective schedule management through schedule performance metrics
- Complete implementation of lessons learned from initial Commissioning Test work in the Lab
- Define and document process for developing Facility Completion Reports
- Complete Lab HEPA aerosol penetration testing required for submittal to Washington Depart of Health prior to Open Source Methods Validation
- Perform work packages for *Water Inventory and Flow Demonstration* (Commissioning Breakdown Structure 02.02.01B) and *ASX Sampling and Transfer Recording* (Commissioning Breakdown Structure 02.02.03B)
- Perform work packages for Empty Container Handling (LRH and LPH) (Commissioning Breakdown Structure 02.10.01A), North-South transport for LFH and LEH Containers (grout filled) (Commissioning Breakdown Structure 02.10.16.A), and Transport of LPH Full Containers North & South (grout filled) (Commissioning Breakdown Structure 02.10.17.A
- Complete work package approval for Melter 1 Heat up and Melter 1 Checkout Commissioning work scopes: *Refractory Conditioning and Frit Addition* (5HLC3JA9531); *Joule Heating and Frit Pours* (5HLC3JA9561); *Glass Pours with Tuning Feed* (5HLC3JA9401); and *Single Melter Operations* (5HLC3JA9431: *Perform the Commissioning Loss of Offsite Power Test*
- Submit 180-day update to Environmental Performance Demonstration Test to DOE for transmittal to Washington Department of Ecology
- Complete preventive maintenance deferral recovery and reduce delinquent preventative maintenance items without engineering disposition to less than twenty-five
- Complete training and qualification for the minimum number of maintenance staff to maintain LAW systems at handover.
- All functional test procedures (previously SRs) have been written and validated to support readiness activities. Develop a business case that identifies risk factors challenging simulator readiness to support operator training in the full qualification of operating crews prior to Loss of power Prior to Loss of Offsite Power demonstration, perform a validation of all Abnormal and Emergency Operating Procedures independent of the procedure review and approval process. This validation should include observation by the line and results approved by Operations Management. The validation should ensure:

- Each procedure can be successfully executed by an operating crew with strong command and control and results in the mitigation and/or management of its respective event
- The procedures compliment the escalation of an event and smoothly transition to an ERO posture, as necessary
- Operations Management verifies Operators are confident in their ability to master the skills and knowledge required to execute the procedures in a simulated abnormal or emergency environment.

- Corrective maintenance backlog less than 15 weeks on average over the PEMP period.

Operational Culture:

- Occurrence Reporting - Facility status and event notifications are provided to DOE in accordance with contractual, procedural, and/or DOE orders in an accurate manner. Major work in progress and in planning are communicated to DOE. Contractor self-reports events and their causes and implements effective corrective actions prior to recurrence of significant or consequential events.
- Conduct of Operations – Contractor ensures effective interfacing and interactions between construction, startup and commissioning, and plant management organizations to provide safe and reliable operations. Implementation of the contractor's Conduct of Operations Council for CY 2021 to ensure continuous improvement that produces effective results for facility operations. Contractor's processes for safe operations are implemented and effectively applied in operational, maintenance, and construction activities incorporating practices resulting in an effective hierarchy of controls being implemented to mitigate WTP hazards.
- Operational Training – Quality contractor training as evidenced through knowledgeable operators and managers within the control room, at the simulator and throughout WTP. Formality of operations demonstrated in contractor's programs including on-the-job training, tests, and test results,
- Operational Oversight – Contractor provides adequate self-assessment of handed-over system/equipment operations. Plant management ensures safe configuration and/or corrective actions in response to identified abnormal conditions and/or deficiencies. Contractor ensures effective interfacing and interactions between construction, engineering, and plant management. Contractor reviews minor events or problems in contractor's organization, management, personnel abilities or practices with attention to detail in identifying, tracking, trending, collective significance evaluation and corrects these minor problems ensuring significant improvements in contractor's performance.

A.8 AWARD FEE OBJECTIVE 6: HIGH-LEVEL WASTE AND PRETREATMENT FACILITIES

DOE will assess this award fee objective in the following areas:

1. **Completion of Design Reviews for multiple Systems of the HLW Facility**

Preliminary (60%) and Detailed (90%) design reviews will be completed for the following HLW Facility systems, to ensure that the system design meets the requirements:

- **By 1st Quarter:** Completion of Melter analysis and design modifications
- **By 2nd quarter:**
  - 60% Design Review of C5 Ventilation System (C5V)
  - 60% Design Review of Medium Voltage Electrical System (MVE)
  - 90% Design Review of Plant Service Water System (PSW)
- **By 3rd Quarter:**
  - 60% Design Review of Stack Discharge System (SDJ)
  - 60% Design Review of Reagents System (NAR/SHR)
  - 90% Design Review of Canister Decontamination Handling System (HDH)
  - 90% Design Review of Export Handling System (HEH)
  - 90% Design Review of Plant Cooling Water System (PCW)

2. **Finalize selection of HLW Ashfall path forward with a rough-order-of-magnitude (VROM) cost estimate**

- Develop final papers and engineering studies with the rationale for the ongoing preferred Operational path forward to Support Briefing to DNFSB incorporating DOE and DNFSB comments from the CY20 briefings for final decision, by 1st quarter
- Submit the VROM estimate for the preferred HLW Ashfall path forward (if selected), by 2nd quarter
- If the operational strategy is not selected, and the design alternatives need to be evaluated, Finalize and issue HLW Ashfall Engineering studies with the path forwards, and VROM estimate resolving pending DOE comments by 3rd quarter

3. **Perform HLW Preliminary Documented Safety Analysis (PDSA) updates**

To maintain alignment with HLW Facility design and the nuclear safety basis, perform the following preliminary documented safety analysis (PDSA) updates:

- DOE approval of PDSA revision 9 covering the updated Hazard Analysis for the following systems by 1st quarter:
  - Radioactive Liquid Waste Disposal system (RLD),
  - HLW Canister Decontamination Handling System (HDH)
  - HLW Canister Export Handling System (HEH), and
  - HLW Melter Offgas Treatment Process System (HOP)
- Submittal of PDSA revision 10 to DOE of updated hazard analysis for melter, natural phenomena, and facility hazards by 3rd quarter

4. **Complete termination with executed agreement with the vendors for remaining 27 Pretreatment Facility suspended procurements to mitigate DOE Risk 1421 liabilities by 4th quarter (excludes PVS Steel and Wholesale Electric Bulk materials)**

B. PERFORMANCE EVALUATION AND MEASUREMENT PLAN GENERAL INFORMATION

B.1 CONTRACT INCENTIVE FEE STRUCTURE

Contract No. DE-AC27-01RV14136 utilizes multiple, performance-based incentive fee components to drive contractor performance excellence in completing the design, construction, and commissioning of the WTP contract.

The award fee provides a performance incentive for the contractor and gives the Government a tool to identify and reward superior performance.

B.2 PROCESS

The total available award fee for the 2021 evaluation period is $7,872,603.

In accordance with FAR 16.401(e)(3)(v), "Incentive Contracts," "General," the contractor is prohibited from earning any award fee when the contractor's overall cost, schedule, and technical performance is below satisfactory.

B.3 PROVISIONAL FEE

Provisional fee requirements in Contract No. DE-AC27-01RV14136 Section B, Clause B.8(g), "Provisional Payment of Fee," apply to this PEMP.

B.4 CONTRACTOR SELF-ASSESSMENT

Contract No. DE-AC27-01RV14136 Section B, Clause B.8(f) states:

> Following each evaluation period, the Contractor may submit a self-assessment, provided such assessment is submitted within ten (10) calendar days after the end of the period. This self-assessment shall address both the strengths and weaknesses of the Contractor's performance during the evaluation period. Where deficiencies in performance are noted, the Contractor shall describe the actions planned or taken to correct such deficiencies and avoid their recurrence. The Contracting Officer will review the Contractor's self-assessment, if submitted, as part of its independent evaluation of the Contractor's management during the period.

B.5 METHOD FOR CHANGING THE PERFORMANCE EVALUATION AND MEASUREMENT PLAN DURING THE EVALUATION PERIOD

Proposed changes to the current period PEMP may be initiated by either DOE or the contractor. Proposed changes shall be in writing. Both DOE and the contractor must agree to any changes. Once agreement is reached, the FDO and contractor representative will sign the revised PEMP. The revision number (e.g., Rev. 1) will be noted on the PEMP. Subsequently, the revised PEMP will be incorporated into the contract by reference via contract modification.

ABBREVIATIONS AND ACRONYMS

DFLAW	direct-feed low-activity waste
DOE	U.S. Department of Energy
FDO	fee-determining official
HLW	high-level waste
LAB	Analytical Laboratory
LAW	low-activity waste
LBL	Low-Activity Waste Facility, Balance of Facilities, and Analytical Laboratory
ORP	U.S. Department of Energy, Office of River Protection
PEMP	performance evaluation measurement plan
QA	quality assurance
WTP	Waste Treatment and Immobilization Plant

REFERENCES

Contract No. DE-AC27-01RV14136, *Design, Construction, and Commissioning of the Hanford Tank Waste Treatment and Immobilization Plant*, U.S. Department of Energy, Washington, D.C., as amended.